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| 10/535,069 | 12/28/2005 | Stefan Capelle | VANM199.002APC | 1840 |
| 20995 7590 03/18/2010 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614 | | | EXAMINER KING, FELICIA C | |
| | | | ART UNIT 1794 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/535,069 | Applicant(s) CAPELLE ET AL. | |
| | Examiner FELICIA C. KING | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29,30,33,35,36 and 45-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29,30,33,35,36,45-55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 1/20/10 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 29, 30, 33,46, 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498) in view of Buensow et al. (US 5,500, 231) and Weber (US 2,434,087) and or Wiseblatt (US 3,304,184).**

Regarding Claim 29: Ano discloses a free amino acid blend comprising the amino acids leucine, isoleucine and phenylalanine [col. 2, lines 36-38], yeast [col. 2, lines 30-34; col. 4, line 34 , and where the combination has a dry matter content of at least 90% [col. 3, lines 33-34] but does not disclose sourdough or valine in the blend. However, Buensow discloses a free flowing fermented sourdough [col. 3, line]. Additionally, Weber discloses amino acids in powder form to enhance flavor in bread dough [col. 1, lines 4-9; 32-39, col. 2, lines 20-21] and further discloses leucine, isoleucine, valine and phenylalanine as desirable amino acids [col. 3. lines 10-23; Claim 9]. Additionally, Wiseblatt discloses valine, as an amino acid for the improvement of flavor in bread [col. 2, line 30 and line 69-70].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, and Wiseblatt before him or her to modify the

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process of Ano to include the sourdough of Buensow because the sourdough would have added the flavors typical of sourdoughs to the blend. Further, it would have been obvious to modify the amino acid blend of Ano to incorporate the valine of Weber because valine can be substituted for other amino acids allowed for in Ano. Further, valine is desirable because valine contributes to the strong yeasty flavor of bread [Wiseblatt col. 2, line 30]. Further, although Weber and Wiseblatt do not disclose fermentation it is known in the art that bread formation usually involves a resting or proofing step which involves the fermenting and rising of the dough. Therefore, although Weber and Wiseblatt do not specifically disclose fermentation, their recitation of amino acids for the inclusion in bread making would have made it obvious to one having ordinary skill in the art that that the flavors produced by the amino acids not only pertained to their natural aroma/flavor but the properties present upon addition to dough, fermentation and subsequent baking. Further, it would have been obvious that the amino acids would have been fermented upon mixing and proofing or prolonged resting with sourdough and yeast and to make a bread product.

Regarding Claim 30: Ano discloses a free amino acid blend as discussed above but does not disclose where the blend has a 95% dry matter content.

Ano discloses a blend having a 90% dry matter content and although Ano does not disclose 95% as in the instant claim, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the percentage of dry matter in order to lower the water content to further assure shelf stability, and since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claim 33: Ano discloses the free amino acid blend wherein the amino acid ratio of the blend is: Leucine: 2; Isoleucine: 0.5; and Phenylalanine: 0.5 [col. 2, table 1] but does not disclose valine at .6 in the amino acid blend. However, Wiseblatt discloses valine in an amount of

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.005%, as an amino acid for the improvement of flavor in bread [col. 2, line 30 and line 69-70] as discussed above.

At the time of the invention, it would have been obvious to one having ordinary skill in the art having the teachings of Ano, Buensow, Weber, and Wiseblatt before him or her to modify the preferred amino acid blend in specific proportions because Wiseblatt discloses that the flavor of bread may be modified by using various mixtures of amino acids in suitable proportions [col. 2, lines 47-48] and because the additional amino acids in Ano can be replaced by valine to provide to desirable yeasty flavor.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the ratio of amino acids for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claim 46: Ano discloses a free amino acid blend as discussed above and where the amino acid blend increases the flavor metabolism of yeast and/or bacteria in long fermentation systems [col. 2, lines 19 – 26 and col. 3, Fermentation power] and discloses the production of fragrant flavor components in the manufacture of bread [col.1, lines 30-31]. Additionally, Buensow discloses free flowing fermented sourdough as discussed above and incorporating the sourdough in order to make bakery products and breads [col. 2, lines 27-31].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, and Wiseblatt before him or her to include the blend in a sourdough process because the blend already comprises flavor components necessary to achieve the characteristic taste of sourdough bread and upon addition to yeast and water, would result in sourdough bread having the added nutritional value of the amino acid blend.

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Regarding Claim 50: Ano discloses a process for making the free amino acid blend as discussed above but does not disclose where the amino acids are obtained from a protein hydrolysate. However, Weber discloses hydrolyzing proteins in order to obtain amino acids for use in bread dough [col. 1, lines 4-9; 32-37] and further discloses using hydrolyzed proteins that provide leucine, isoleucine, valine and phenylalanine [col. 3, lines 10-23; Claim 9].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, and Wiseblatt before him or her to modify the amino acid source for a protein hydrolysate because the addition of synthetic or separately produced amino acids is an expensive process [Weber, col. 1, lines 12-15] and therefore adding a protein hydrolysate known to contain the desired amino would still provide flavor and nutritional value to the bread product while keeping production costs to a minimum.

Regarding Claim 51: Ano discloses a free amino acid blend as discussed above and further discloses adding yeast [Experiment 2]. Ziemke discloses sourdough as discussed above.

Regarding Claim 52: Ano discloses a free amino acid blend as discussed above and further discloses adding yeast which is contain yeast cells and therefore is considered high in nucleotide content [Experiment 2].

At the time of the invention it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, and Wiseblatt that the yeast cells would have been high in nucleotide content since yeast cells are living things made up of genetic material/nucleotides which form DNA.

Regarding Claim 53: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34].

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4. **Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498) Buensow et al. (US 5,500, 231), Weber (US 2,434,087), and Wiseblatt (US 3,304,184) as applied to claim 29 above and in further view of Johnson (US 3,897,568).**

Regarding Claim 35: Ano discloses the free amino acid blend as discussed above but does not disclose where the blend is produced by co-extrusion or blending. However, Johnson discloses an ingredient formulation produced by co-extrusion or dry- blending [col. 8, lines 19-20].

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ano, Buensow, Weber, Wiseblatt, and Johnson before him or her to modify the production of ingredient formulation of Ano for the dry blending of Johnson because dry mixtures can be readily blended, stored, and transported [col. 7, lines 42-45].

5. **Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), Buensow et al. (US 5,500, 231), Weber (US 2,434,087), and Wiseblatt (US 3,304,184) as applied to claim 29 above and in further view of Rudel (US 4,961,937).**

Regarding Claim 36: Ano discloses the free amino acid blend as discussed above but does not disclose where the blend is vacuum packaged. However, Rudel discloses a vacuum packaged dough product [col. 23, lines 9-11].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, Wiseblatt, and Rudel before him or her to modify the disclosure in Ano to include the vacuum packaging step in Rudel because after the production of the ingredient formulation it would have been obvious to preserve the dried blend in some manner and that the manner of packaging is a factor in the maintenance of flavor in such compositions [col. 11, lines 51-62].

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6. **Claims 45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), Buensow et al. (US 5,500, 231), Weber (US 2,434,087), and Wiseblatt (US 3,304,184) as applied to claim 29 above and in further view of Boecker (EP 1110458 Derwent Abstract) and Adams et al. (2001 Fermentation and Food Safety”).**

Regarding Claim 45: Ano discloses the free amino acid blend with yeast as discussed above but does not disclose fermenting a dried fermented sourdough with yeast, flour and water. Buensow discloses free flowing fermented sourdough as discussed above but does not explicitly disclose its incorporation into additional flour and water and then fermenting the mixture with yeast. However, Boecker discloses dried sourdough for further use in preparation of a sourdough product [abstract]. Adams discloses that it is well known to take a small quantity of previously fermented sourdough and to mix it with new dough (generally containing flour and water)[pg. 6].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, Wiseblatt, Boecker, and Adams before him or her to modify the amino acid and yeast blend of Ano to include fermenting the fermented dried sourdough with yeast, flour and water flour and water since it is well known in the art to make bread by adding a portion of a fermented sourdough to flour and water and further is also known in the art to take a small amount of fermented sourdough and add it to new dough (generally containing yeast, water and flour).

Regarding Claim 48: Ano discloses a free amino acid blend as discussed above and further discloses adding a carbon source which is sugar [col. 4, line 33].

7. **Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498), Buensow et al. (US 5,500, 231), Weber (US 2,434,087), and Wiseblatt (US 3,304,184) as applied to claim 29 above and further in view of Lendvay et al. (US 3,499,765).**

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Regarding Claim 49: Ano discloses the free amino acid blend with yeast as discussed above but does not disclose proteases, transaminases, carboxylases, dehydrogenases or esterases.

However, Lendvay discloses proteases [col. 7, line 34].

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, Wiseblatt, and Lendvay before him or her to modify the method of making the composition in Ano to incorporate the protease in Lendvay because proteases can be easily incorporated into a process for making dough as evidenced by the mixtures presented in Lendvay [col. 7, lines 29-35]. Further, the incorporation of the enzyme causes a reaction between amino acids and sugars which result in a bread like flavor [col. 7, lines 12-14].

8. **Claims 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ano et al. (US 3,536,498)n Buensow et al. (US 5,500, 231) and Weber (US 2,434,087) and Wiseblatt (US 3,304,184), as applied to claims 29 and 46 above and in further view of C. Thiele et al., Cereal Chemistry, Vol. 79, Number 1.**

Regarding Claim 54: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34] but does not disclose where the dosage of the blend of amino acids is about 0.05% on total flour of a bakery product. However, Thiele discloses that increasing the concentration of free amino acids improves the flavor of bread [Thiele, abstract]. Thus, the increase in the percentage of free amino acids from 0.001% to about .05% is a result effective variable in the improvement of flavor in a bakery product.

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, Wiseblatt, and Thiele before him or her to modify the percentage of amino acid blend in Ano to a higher percentage as taught by Thiele because Thiele

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teaches that a higher percentage of amino acid will enhance flavor in bread. Therefore, it would have been obvious to utilize an amino acid blend at higher an amino acid percentage to obtain a more flavorful bread.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of the blend of amino acids for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding Claim 55: Ano discloses a free amino acid blend as discussed above and further discloses where the dosage of the blend of amino acids is at least 0.001% of a final product [col. 2, lines 41-44 and col. 4, line 34] but does not disclose where the dosage of the blend of amino acids is about 0.0375% on total flour of a bakery product. However, Thiele discloses that increasing the concentration of free amino acids improves the flavor of bread [Thiele, abstract]. Thus, the increase in the percentage of free amino acids from 0.001% to about .0375% is a result effective variable in the improvement of flavor in a bakery product.

At the time of the invention, it would have been obvious to one of ordinary skill in the art having the teachings of Ano, Buensow, Weber, Wiseblatt, and Thiele before him or her to modify the percentage of amino acid blend in Ano to a higher percentage as taught by Thiele because Thiele teaches that a higher percentage of amino acid will enhance flavor in bread. Therefore, it would have been obvious to utilize an amino acid blend at higher an amino acid percentage to obtain a more flavorful bread.

Further, it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the amount of the blend of amino acids for the intended application, since it has

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been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Response to Arguments

9. Applicant's arguments, see pgs 9-13, filed 1/20/10, with respect to the rejections of claims 29-65 under *Ano et al.* (US 3,536,498) and *Ziemke et al.* (US 4,034,125) and secondary references *Wiseblatt* (US 3,304,184), *Weber* (US 2,434,087), *Johnson* (US 3,897,568), *Rudel* (US 4,961,937) *Boecker* (EP 1110458 Derwent Abstract) and *Adams et al.* (2001 Fermentation and Food Safety") *Lendvay et al.* (US 3,499,765), *C. Thiele et al.*, *Cereal Chemistry*, Vol. 79, Number 1 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of

10. **Claims 29, 30, 33, 46, 50-53:** *Ano et al.* (US 3,536,498) in view of *Buensow et al.* (US 5,500, 231) and *Weber* (US 2,434,087) and *Wiseblatt* (US 3,304,184).

11. **Claim 35:** *Ano et al.* (US 3,536,498) *Buensow et al.* (US 5,500, 231), *Weber* (US 2,434,087), and *Wiseblatt* (US 3,304,184) in further view of *Johnson* (US 3,897,568).

12. **Claim 36:** *Ano et al.* (US 3,536,498), *Buensow et al.* (US 5,500, 231), *Weber* (US 2,434,087), and *Wisenblatt* (US 3,304,184) in further view of *Rudel* (US 4,961,937).

13. **Claims 45 and 48:** *Ano et al.* (US 3,536,498), *Buensow et al.* (US 5,500, 231), *Weber* (US 2,434,087), and *Wiseblatt* (US 3,304,184) in further view of *Boecker* (EP 1110458 Derwent Abstract) and *Adams et al.* (2001 Fermentation and Food Safety").

14. **Claim 49:** *Ano et al.* (US 3,536,498), *Buensow et al.* (US 5,500, 231), *Weber* (US 2,434,087), and *Wiseblatt* (US 3,304,184) further in view of *Lendvay et al.* (US 3,499,765).

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15. **Claims 54 and 55:** Ano et al. (US 3,536,498), Buensow et al. (US 5,500, 231) and Weber (US 2,434,087) and Wiseblatt (US 3,304,184) in further view of C. Thiele et al., Cereal Chemistry, Vol. 79, Number 1.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FELICIA C. KING whose telephone number is (571)270-3733. The examiner can normally be reached on Mon- Thu 7:30 a.m.- 5:00 p.m.; Fri 7:30 a.m. - 4:00 p.m. alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/F. K./

Examiner, Art Unit 1794

/Jennifer C. McNeil/

Supervisory Patent Examiner, Art Unit 1794